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OF THE
BIOLOGICAL SOCIETY OF WASHINGTONA NEW *WATOPHILUS* FROM UTAH, INCLUDING
A LIST OF ALL KNOWN SPECIES (CHILOPODA:
GEOPHILOMORPHA: CHILENOPHILIDAE)

BY R. E. CRABILL, JR.

*National Museum of Natural History,
Smithsonian Institution, Washington, D.C.*

In his 1929 monograph of the Order, Attems was unable to present a key for Chamberlin's species of *Watophilus*. I am unable to do so now, and for the same reasons: they are inadequately described, and I have never seen a specimen other than the one presented here as new. An adequate discussion of the critical diagnostic characters is nowhere in the literature. Neither have I been able to locate the typical specimens in the several Chamberlin Collections. In 1964 when I conferred last with Professor Chamberlin, he revealed that many, perhaps most, of his types described prior to 1913 could not be located; he presumed them to be lost. Most of the Chamberlin forms presented here were described before 1913. I am therefore, at the moment, unable to do more than present a list of the known species; all are North American. Hopefully, additional *Watophilus* material will be collected in the future.

The genus, whose members are apparently very rarely collected, is clearly most closely related to the ubiquitous Holarctic genus *Arctogeophilus*, whose many species are commonly encountered in temperate to arctic North America. Both belong to a very small suite of chilenophilid genera one of whose notable features, in my opinion, is the absence of a ventral condyle on the second maxillary telopodite. So far as I am aware, this remarkable condition escaped the notice of Verhoeff and Attems. The presence in *Watophilus* of spinous processes on the second maxillary telopodite distinguishes it both from *Arctogeophilus* and all other North American chilenophilids.

Although I am at the moment unable to distinguish all of the species of *Watophilus* from one another, it is possible to say, even from what little is known of them, that the species presented here as new cannot be referable to any other known member of the genus. All previously described species are said to possess a distinct tuberculate ultimate pedal pretarsus; *knowltoni*, new species, lacks an ultimate pedal pretarsus altogether.

Possibly the new form is most like *utus* Chamberlin, known only from Utah, in which case they differ as follows. In *utus*: (1) pedal pairs, 65. (2) Ultimate pretarsus present and tuberculate. (3) Prehensorial segments 2 and 3 each with a small denticle. In *knowltoni*: (1) pedal pairs, 49. (2) Ultimate pedal pretarsus absent. (3) Prehensorial segments 2 and 3 unarmed.

***Watophilus knowltoni*, new species¹**

Holotype: female. Utah: Box Elder Co., Kelton Pass, in juniper duff; April 28, 1969; George F. Knowlton, leg. Deposited in the National Museum of Natural History.

Description: GENERAL. Body length, 13 mm. Color, light yellow throughout. Body posteriorly gradually attenuate. Pedal segments, 49. ANTENNAE. Relatively long, ca. 2.8× longer than the head. Articles: filiform, each longer than wide; the more proximal articles with relatively few long setae, distally these increasing in number and becoming shorter. Ultimate article mesally and ectally at midlength and distal thereto with a patch of short robust hyaline modified setae. CEPHALIC PLATE. Substantially longer than wide (37:26). Shape: sides evenly slightly excurved; rear margin evenly rounded, excurved. Frontal suture absent. With two paramedian bands of coarse areolation extending from rear margin to labral level. Prebasal plate not evident. CLYPEUS. Antero-centrally with a small poorly-defined clypeal area (fenestra *apud* Chamberlin) within which are 2 long setae; immediately anterior thereto on each side is a long seta. With a pair of prelabral setae; clypeus otherwise glabrous. Paraclypeal sutures slightly sinuous, complete. LABRUM. Sidepieces meeting centrally. Midpiece with long hyaline filaments. Clypeolabral suture distinct and complete. FIRST MAXILLAE. Coxosternum: anteroposteriorly very deep, undivided, not sutured; lappets scabrous, short, attaining only end of telopodite 1st article; medial lobes basally broad, narrowing rapidly distally. Telopodite: bipartite; lappet thick, robust, scabrous; extending slightly beyond end of telop-

¹ Named in honor of Dr. George F. Knowlton, valued friend of many years, generous and tireless collector, whose efforts for decades have contributed to our knowledge of Utah, his native state.

odite. SECOND MAXILLAE. Isthmus: undivided and uniformly areolate, not hyaline; extending posteriorly beyond level of pore. Coxosternite: statumen well-developed, its posterior end curving anteroposteriorly; anteromesal projection absent; ventral condyle absent, dorsal condyle present. Telopodite: 1st article basally much narrower than the expanded distal half, anteromesal and anteroectal corners each with a small spinous process; 2nd article anteroectally with a similar though much smaller process (it is virtually abortive); ultimate article (homologue of a claw) is a short, blunt, minutely spinous tubercle. FORCIPULAR SEGMENT. Flexed prehensors exceeding anterior margin of head. Prehensor: 1st article very long, anteromesally with a blunt, unpigmented denticle; articles 2 and 3 unarmed. Tarsungula: with a large, pigmented, pointed basal denticle; ungular blade edges smooth, not serrulate, the blade relatively short and robust. Poison calyx very small, suborbicular, its digitiform appendices extending only posteriorly; poison gland elongate, housed in articles 1, 2, and 3. PROSTERNUM. Pleurograms absent. Pleuroprosternal sutures straight, parallel to prosternal margin, complete for ca. 95% of their length, anteriorly not quite attaining margin. Anteromedial denticles absent. TERGITES. Basal plate neither suturate nor sulcate, trapezoidal. Remaining tergites (except ultimate pedal) longitudinally bisulcate. LEGS. Sparsely clothed with very long setae. Pretarsi: anterior parungues uncommonly long, ca $\frac{2}{3}$ as long as their claws; posterior parungues present but minute, virtually abortive. STERNITES. Without glandular pores. Midlongitudinally weakly sulcate. Setae few, short. ULTIMATE PEDAL SEGMENT. Pretergite not bilaterally fissate. Tergite: sides notably excurved; greatest length exceeding greatest width; rear margin narrowly rounded. Sternite: shape trapezoidal; posteriorly truncate; sides straight, convergent; greatest length exceeding greatest width. Coxopleuron: only slightly inflated and virtually glabrous; pores anteroventrally and mostly exposed, there numbering 4-5, and anterodorsally and concealed beneath the pretergite, there numbering 2-3. Ultimate leg: $\frac{1}{4}$ longer than the penult; articles slightly inflated, each much longer than wide; ventrally on trochanter through tibia with numerous tiny setae, in addition all articles sparsely clothed with very long setae. Tarsus: bipartite; first article slightly longer than second; article 2 subclavate, distally blunt, without a pretarsus of any sort; apically with a minute seta. POSTPEDAL SEGMENTS. Female gonopods flat, entirely fused medially without demarcation, unipartite. Anal pores prominent, lateral.

The Known Species of *Watophilus*²

Subgenus *Watophilus* Chamberlin, 1912A: 662

1. *alabamæ* Chamberlin, 1912B: 421.

—Type-locality: Anniston, Mapleville, Tallulah Falls, Ga.

—Elsewhere recorded only from South Carolina.

² It was plainly Chamberlin's intent to present *Watophilus* as new in the M.C.Z. Bulletin issued in April of 1912. Therein he stated that its type-species is *alabamæ*,

2. *errans* Chamberlin, 1912A: 662.
—Type-locality: Berkeley, Cal.
—No other record.
3. *knowltoni* Crabill, here described.
—Type-locality: Kelton Pass, Box Elder Co., Utah.
—No other record.
4. *laetus* Chamberlin, 1912A: 662.
—Type-locality: Berkeley, Cal.
—Elsewhere recorded from Stanford, Pacific Grove, Cal.
5. *utus* Chamberlin, 1928: 95.
—Type-locality: La Sal Mountains, San Juan Co., Utah.
—No other record.
6. *dolichocephalus* (Gunthorp, 1913: 169).
—Type-locality: Cowley Co., Kans.
—No other record.

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the only species mentioned in that publication. However, the generic name first appeared in print in the February 1912 issue of the *Pomona Journal of Entomology*, at which time the genus, there *not* presented as new, was said to contain only two species, *laetus* and *errans*: no type-species was mentioned. Therefore Chamberlin's fixation of the type-species, *alabamae*, is neither through original designation nor monotypy, rather through subsequent designation.